

ORDINANCE NO. _____, SERIES 2007

AN ORDINANCE READOPTING SECTIONS 150.020 – 150.028, 150.080-150.083, 150.086-150.096, 150.998 AND 150.999 OF THE LOUISVILLE/JEFFERSON COUNTY METRO GOVERNMENT CODE OF ORDINANCES (“CODE”) PERTAINING TO BUILDING REGULATIONS AND DELETING SECTION 150.004 AND THE APPENDIX PERTAINING TO SOLAR HEATING, COOLING AND HOT WATER SYSTEMS.

SPONSORS: Councilmen Blackwell and Downard

BE IT ORDAINED BY THE LEGISLATIVE COUNCIL OF THE LOUISVILLE/JEFFERSON COUNTY METRO GOVERNMENT (“COUNCIL”) AS FOLLOWS:

SECTION I. Sections 150.020 – 150.028, 150.080-150.083, 150.086-150.096, 150.998 and 150.999 of the Code are hereby readopted to read as follows:

§ 150.020 TITLE AND PURPOSE.

(A) This ordinance may be cited as "Louisville/Jefferson County Heating, Air Conditioning and Refrigeration Standards."

(B) The purpose of this ordinance is to safeguard life, health, property and public welfare by providing minimum standards for the installation of heating, air conditioning and refrigeration equipment.

§ 150.021 DEFINITIONS.

For the purpose of this ordinance, the following definitions shall apply unless the context clearly indicates or requires a different meaning.

BOARD. The Heating, Air Conditioning and Refrigeration Board of Control.

CODE. The Basic Mechanical Code as adopted by the Kentucky State Uniform Building Code.

DIVISION. The Louisville/Jefferson County Division of Code Enforcement.

DIRECTOR. The Director of the Louisville/Jefferson County Division of Code Enforcement.

DEPARTMENT. The Department of Heating, Air Conditioning and Refrigeration.

LICENSED CONTRACTOR. A person who holds a valid license issued by the Board.

INSPECTOR. The Chief Heating, Air Conditioning and Refrigeration Inspector or his authorized representative.

SUPERVISOR. Any person who directs, installs, supervises, or controls the installation, alteration repair or maintenance of heating or air conditioning equipment by others.

§ 150.022 APPLICATION AND EXEMPT PERSONS.

(A) The provisions of this ordinance shall apply to the installation (repair or maintenance) of all heating, air conditioning and refrigeration equipment located within Jefferson County including equipment or apparatus located in private plants, provided, however, that there is exemption from this ordinance.

(B) Installation of public utilities made pursuant to the generation or distribution of the utility.

(C) Other incorporated cities located within Jefferson County which maintain their own heating, air conditioning and refrigeration division.

§ 150.023 ADMINISTRATION; RIGHTS AND POWERS OF INSPECTORS.

(A) This ordinance shall be administered by the Department of Heating, Air Conditioning and Refrigeration of the Louisville/Jefferson County Division of Code Enforcement.

(B) Whenever the inspector shall have cause to suspect that a defect exists in a heating, air conditioning or refrigeration system located on any property subject to the provisions of this ordinance, he may demand entry during reasonable hours upon displaying his badge of authority or other credentials in order to discharge his official duties which include the inspection or testing of any heating, air conditioning or refrigeration installation. If the owner or occupant refuses to admit the inspector or hinders or interferes with him in any manner, the inspector shall have the power to discontinue gas and electric service to the location.

(C) The inspector shall have the power to disconnect or order the discontinuance of gas and electrical service to equipment or apparatus found to be in violation of the code.

§ 150.024 PERMITS.

(A) A permit must be obtained from the Division of Code Enforcement prior to any heating, air conditioning or refrigeration repair or alteration or the removal of an existing system. The permits shall be valid only for the location cited in the application.

(B) Application for heating, air conditioning or refrigeration permits shall be made by a licensed contractor of the appropriate class and shall state the names of all owners, the location of the property upon which the work is to be performed and the estimated full extent of work to be performed. The inspector may require that a full set of plans accompany the permit application. The plans shall be drawn in sufficient detail to show full compliance with the code.

(C) Approval of plans shall not in any manner relieve the license holder from the responsibility of making the entire installation in accordance with the code.

(D) The owner occupant of a dwelling house may by himself install a heating, air conditioning and/or refrigeration system in his home upon obtaining a permit in accordance with the provisions of this ordinance provided, however, that a set of plans accompany the permit application.

(E) Any permit shall be void when work is not commenced within six months of date of issuance or the person to whom the permit is issued gives written notice to the Division of his desire to be relieved of further responsibility.

§ 150.025 INSPECTIONS.

(A) Upon receipt of notice the inspector shall make an inspection and if the installation conforms to the code, he shall give notice of approval.

(B) Where an installation is found to be not in compliance with the code or otherwise unfit or unsafe, the inspector shall give notice to the owner and/or licensed contractor, and if necessary, operation of such installation shall be discontinued in which case notice of such discontinuance shall be posted by the inspector. It shall be unlawful to remove such notice without the approval of the inspector.

(C) No installation or repair shall be covered or concealed until approved by the inspector and it shall be unlawful for any person to operate any installation until approval has been granted by the inspector.

(D) Where an installation of a type covered by the code has been started without a permit, the inspector shall post a "stop work" order which shall not be removed until a permit has been obtained.

(E) The inspector shall, upon request, issue a certificate of final inspection when the installation is complete and found to comply with the code. No certificate will be issued on incomplete work.

§ 150.026 LICENSE CLASSIFICATION, QUALIFICATION AND EXAMINATION.

(A) There shall be four classes of heating, air conditioning and refrigeration licenses:

(1) Heating and air conditioner contractors license is required of any person, firm or corporation who engages in the business of installation, alteration, maintenance or repair of heating or air conditioning in Jefferson County.

(2) Refrigeration contractors license is required of any person, firm or corporation engaging in the business of installing, altering, repairing or maintenance of refrigeration equipment.

(3) Supervisor heating and air conditioning license is required of any person who directs, installs, supervises, or controls the installation, alteration, repair or maintenance of heating or air condition equipment by others.

(4) Limited contractors license (non- combustible) is required of any person, firm or corporation who engages in the business of installation, alteration, maintenance or repair of non-combustible heating equipment.

(B) Applicants for license shall file with the Division of Heating, Air Conditioning and Refrigeration an application accompanied by an affidavit stating that such person has at least five years experience in the performance of heating and/or air conditioning and/or refrigeration work under a licensed contractor with

a minimum of one-year experience in making installations. Any person possessing a certificate of graduation or a diploma from a recognized technical school or college may include the number of years as part of the required five years experience with the approval of the Board.

(C) An applicant shall submit to an examination given by the Board. Such examination shall pertain to the correct installation and performance of heating and/or air conditioning and/or refrigeration work as set out by the code. A test score of 75% will be required prior to the issuance of a license. The examination requirements shall not apply to any present licensed contractor or those refrigeration and air conditioning contractors licensed within 60 days after this code becomes effective.

(D) All licenses shall be issued for the calendar year or fraction thereof and shall be renewed on or before January 31 of each year and shall expire at midnight on December 31. No license may be renewed after a period of 31 days from the date of expiration.

(E) Any person applying for a heating or air conditioning license as required by this ordinance shall, before being granted a license, execute and deliver to the Director of Code Enforcement a bond in the sum of \$2,500 payable to the Metro Government. Such bond shall be made for the use and benefit of the owner or any party with an interest in the property where the licensee furnishes any materials or performs any services against loss or damage which may arise by reason of the work done or materials furnished. Such bond shall be executed by

each applicant with a surety company authorized to do business in the State of Kentucky. Each bond shall certify the soundness of the work to be performed and compliance with the provisions of this code. The principal and surety upon such bond shall be jointly and severally liable to the property owner or any person who contracts for such work in such amount as is necessary to correct the deficient work and to conform fully with the provisions of the code.

§ 150.027 BOARD OF HEATING, AIR CONDITIONING AND REFRIGERATION CONTROL.

(A) There shall be appointed by the Mayor subject to the approval of the Metro Council, a Board of Heating, Air Conditioning and Refrigeration Control consisting of five members, one of whom shall be an engineer, with heating, air conditioning and refrigeration background, one a representative of a public service company, one a heating and air conditioning contractor, one possessing a refrigeration contractor license and one representing the heating, air conditioning and refrigeration industry at large. The Director of Code Enforcement and the Chief Heating Inspector shall be ex-officio members and one shall preside at all meetings of the Board. The term of appointment shall be for a period of two years. The Board shall meet at least every three months in regular session or as necessary and each appointed member shall receive \$10 per day for each regular meeting attended, not exceeding one meeting per month. A majority of the Board shall constitute a quorum. The members of the Board shall elect a secretary to keep the record of all meetings.

(B) The Board shall be vested with the authority to act as a Board of Examiners and shall at its regular sessions examine applicants for licenses. The applicants shall be examined concerning their qualifications and competency to engage in the business of heating, air conditioning and refrigeration installation and repair.

(C) The Board shall have the authority to revoke any license when the application filed for a license is found to contain any false statement or information.

(D) If a complaint is made respecting the character of work performed by the holder of any of the occupational licenses issued pursuant to this ordinance, the Board shall immediately cause written notice of such complaint to be mailed to the licensee, the notice shall state the nature of the complaint and the time which the Board has set for a hearing thereon. The licensee shall be allowed to attend such hearing, and if after such hearing the Board is of the opinion that the complaint is justified, it shall have the power to suspend the occupational license of the licensee.

(E) The Board may refuse to issue permits to a licensee if there is a failure of the licensee to correct any defect, error or deficiency in any work performed by him or under his supervision or direction within 15 calendar days after notification thereof. The Board shall be promptly notified of the correction of any defect, error or deficiency.

(F) In addition to the authority granted hereby, the Board is charged with the duty to act as an advisory body to the Chief Heating Inspector with powers to formulate such rules or regulations as it may deem necessary and to render upon request an interpretation of the code. Any such rules, regulations and interpretations shall be filed with the Building Director and Mayor and shall not be operative until approval by both.

§ 150.028 PENALTY.

Any person who violates any provisions of this ordinance shall be fined not less than \$10, nor more than \$1,000. Each day the violation continues shall constitute a separate offense.

§ 150.080 TITLE.

This ordinance may be cited as "Louisville/Jefferson County Building Construction Identification, Licensing, Permits and Fees."

§ 150.081 OBJECTIVE.

The objective of this ordinance is to bring the building construction identification, licensing, permits and fees in Jefferson County into conformity with those presently in effect or soon to be in effect in Jefferson County.

§ 150.082 DEFINITIONS.

For the purpose of this ordinance, the following definitions shall apply unless the context clearly indicates or requires a different meaning.

BUILDING OFFICIAL. Any authorized employee of the Louisville/Jefferson County Code Enforcement. The term ***BUILDING OFFICIAL*** shall also be synonymous with the terms ***INSPECTOR*** and ***CODE OFFICIAL*** as used herein.

CODE ENFORCEMENT and ***DEPARTMENT.*** The section of the Metro Government that administers building construction licensing and identification; issues building and installation permits and collects administrative fees.

CONTRACTOR and ***LICENSEE.*** Any person, firm, partnership or corporation identified or possessing a license issued in accordance with this ordinance.

DIRECTOR. The Louisville/Jefferson County Deputy for Code Enforcement.

HVAC. Heating, ventilation and air conditioning.

IDENTIFIED. The holder is a contractor identified in this ordinance who has provided Code Enforcement with the necessary documents and/or proof to be officially on file and does not require a demonstration of trade/professional competency.

INSPECTOR. Any inspector employed by the Louisville/Jefferson County Code Enforcement.

LICENSE. The holder has proof that he/she has passed the written examination and/or fulfills other prerequisites for the particular profession as required by this ordinance.

PERMIT. The document issued by Code Enforcement that allows the applicant to proceed with the proposed work.

§ 150.083 GENERAL REQUIREMENTS FOR IDENTIFICATION AND LICENSES.

(A) In order to safeguard life, health and property, any person, firm, partnership or corporation practicing or offering to practice the following types of work or to contract that work in Jefferson County, shall hereafter be required to be identified with the county, and it shall be unlawful for any person, firm, partnership or corporation to practice or offer to practice that type of work in Jefferson County unless such person, firm, partnership or corporation has been duly identified under the provisions of this code. No person, firm, partnership or corporation shall obtain a permit unless they are an identified contractor or the property owner.

(B) No license or identification granted under the provisions of this ordinance may be assigned or transferred.

(C) All identified contractors shall notify the Code Enforcement Office within five working days if the person, firm, partnership or corporation changes

ownership or changes the business name. All licensees shall notify the Code Enforcement Office within five working days if the licensee changes contractors.

(D) Any license may be revoked or suspended for the following causes:

(1) Execution of a false affidavit in connection with the license or identification application.

(2) Failure to comply with this ordinance within 15 days after having received written notice of such violations from the Code Enforcement.

(3) Failure to obtain permits in advance for work to be performed when such permits are required by code.

(4) Failure to correct any code deficiency in any work within the time specified in the notification of such code deficiency or within such additional time as may be allowed upon request to Code Enforcement.

(5) Failure to purchase and maintain insurance as required by this ordinance with an insurance company licensed to do business in Kentucky.

(E) When the license of any licensee is revoked, such licensee shall be required to submit an application for approval and pass the required examination before a new license shall be issued.

(F) Payment of license or identification fees as described in the fee section of this code shall be made prior to issuing any license or identification.

(G) Before a permit may be issued, all contractors must provide Code Enforcement through affidavit, that the person, firm, partnership or corporation shall be in compliance with the Kentucky requirements for Workers' Compensation Insurance according to KRS Chapter 342 and Unemployment Insurance according to KRS Chapter 341, unless a certificate of insurance for a specific amount of coverage is required in detail under the type of identification that the contractor has obtained.

(H) Before a permit may be issued, all contractors shall submit a certificate of insurance, verifying that the person, firm, partnership, or corporation has obtained a commercial general liability insurance policy with limits of liability of not less than \$250,000, unless higher limits are required for specific types of work, for both the Each Occurrence and Aggregate Limits. The policy shall also contain products and completed operations coverage with a minimum \$250,000 aggregate limit, unless higher limits are required for specific types of work.

(I) Before a permit may be issued, all contractors shall have their workers compensation and general liability insurance policies endorsed to state that written notice will be sent by their insurance company of the company's intention to terminate or cancel such policy, at least 75 days, as required by KRS 304.20-320, before the cancellation shall take effect, to Louisville/Jefferson County Code Enforcement. Upon the date of expiration, the code official shall cause the affected contractor's identification to become suspended until such time as

satisfactory evidence of a new insurance policy is presented to Code Enforcement.

(J) Before a permit may be issued, any contractor required by this ordinance to provide a surety bond shall require that its surety company notify Code Enforcement in writing of its intention to terminate or cancel such bond at least 30 days before the cancellation shall take effect. Upon the date of expiration, the code official shall cause the affected contractor's identification to become suspended until such time as evidence of a new bond is presented to Code Enforcement.

(K) Before a permit may be issued, any licensee who has not renewed his/her license within a period of one year after it expired shall be subject to reexamination, as determined by the code official or the appropriate control board. However, any master electrician, HVAC licensee, or wrecking licensee who seeks to renew a license which has lapsed for a period greater than one year shall be required to either pay the required license fee for the years for which the license was not renewed, or achieve a passing score on the appropriate examination.

§ 150.086 HVAC CONTRACTOR; IDENTIFICATION AND LICENSE REQUIREMENTS.

(A) Each identified HVAC contractor shall have a HVAC licensee as a full time employee.

(B) Any person, firm, partnership or corporation applying for a HVAC contractor identification shall, before being granted an identification number, execute and deliver to the Director a bond in the minimum sum of \$5,000 payable to the Louisville/Jefferson County Treasurer; such bond should be made for use and benefit of the owner of any party of interest in the property where said firm furnishes any materials or performs any service against loss or damage which may arise by reason of the work done or material furnished in violation of the requirements of any law of the State of Kentucky or any ordinance of the Metro Government controlling such work. Such bond shall be executed by each applicant with any recognized and responsible surety company authorized to do business in the State of Kentucky as surety thereon. Provided, however, such surety company may cancel said bond upon giving 30 days written notice to the Metro Government. Such bond shall contain in substance the agreement that if any HVAC work is performed in violation of the provisions of this code the principal and surety upon such bonds shall be jointly and severally liable to the home owner or any other person contracting for HVAC work to such amount which is necessary to correct such HVAC work to conform fully with the provisions of the code.

(C) All licensed vehicles used in the operation of a HVAC contractor are to be properly identified and such identification shall be visible on the outside of the vehicle at all times. The licensed vehicle shall bear the name of the company and identification number. All such identification shall be in letters not smaller than three inches high and must be kept legible at all times.

(D) Identification shall be from March 1 to February 28.

(E) Any person desiring to obtain a HVAC licensee license shall make an application to the Louisville/Jefferson County HVAC Board of Control, in such form as may be prescribed by Code Enforcement. Provided, however, that any applicant must first have met the following requirements:

(1) Applicants for a license shall file with the Louisville/Jefferson County HVAC Board of Control an application accompanied by an affidavit stating that such person has not had less than five years of experience in the performance of HVAC work with a minimum of one year of experience making installations meeting the minimum requirements of BOCA Mechanical Code. Any persons possessing a certificate of graduation or diploma from an accredited technical school or college may include the number of years of attendance at such school not to exceed four years, as part of the required five years of experience in HVAC work. More attendance, without graduation or completion of the full prescribed course may be recognized only at the discretion of the HVAC Control Board.

(2) Any applicant shall submit to an examination given by the HVAC Control Board. Such examination shall pertain to the correct installation and performance of HVAC work.

(3) A licensee may be only affiliated with one identified contractor.

(4) A HVAC licensee, shall by virtue of his/her HVAC license, be authorized to perform installations of range hood work and solid fuel burning equipment without the additional identification for said trades, as required herein.

(5) Licensing shall be from March 1 to February 29.

§ 150.087 SOLID FUEL BURNING APPLIANCE CONTRACTOR IDENTIFICATION REQUIREMENTS.

(A) Any person, firm, partnership or corporation applying for identification shall, before being granted identification, execute and deliver to the Director a bond in the minimum sum of \$5,000 payable to the Louisville/Jefferson County Treasurer. Such bond shall be made for use and benefit of the owner or any party of interest in the property where the said solid fuel burning appliance contractor furnishes any materials or performs any service, against loss or damage which may arise by reason of the work done or material furnished in violation of the requirements of any law of the Commonwealth of Kentucky or any ordinance of the Metro Government controlling such work. Such bond shall be executed by each applicant with a recognized and responsible surety company authorized to do business in the Commonwealth of Kentucky as surety thereon. Such bond shall contain in substance the agreement that if any work performed or conducted by the solid fuel burning appliance contractor is in violation of the provisions of this ordinance or of any adopted code, the principal and surety upon such bonds shall be jointly and severally liable to the home owner or any other person contracting for solid fuel burning appliance work, for such amount

which is necessary to correct such solid fuel burning appliance work to conform fully with the provisions of this ordinance or any adopted code. Provided, however, such surety company may cancel said bond upon giving 30 days written notice to Louisville/Jefferson County Code Enforcement. Upon date of expiration, the code official shall cause the contractor's identification to become suspended until such time as satisfactory evidence of a new bond is presented to Code Enforcement.

(B) All licensed vehicles used in the operation of a solid fuel burning appliance contractor are to be properly identified and such identification shall be visible on the outside of the vehicle at all times. The licensed vehicle shall bear the name of the company and identification number. All such identification shall be in letters not smaller than three inches high and must be kept legible at all times.

(C) Identification shall be from March 1 to February 29.

§ 150.088 RANGE-HOOD CONTRACTOR IDENTIFICATION REQUIREMENTS.

(Excludes domestic residential range-hoods)

(A) Any person, firm, partnership, or corporation applying for identification shall, before being granted identification, execute and deliver to the Director a bond in the minimum sum of \$5,000 payable to the Louisville/Jefferson County Treasurer. Such bond shall be made for use and benefit of the owner or any

party of interest in the property where the range-hood contractor furnishes any materials or performs any service, against loss or damage which may arise by reason of the work done or material furnished in violation of the requirements of any law of the Commonwealth of Kentucky or any ordinance of the Metro Government controlling such work. Such bond shall be executed by each applicant with a recognized and responsible surety company authorized to do business in the Commonwealth of Kentucky as surety thereon. Such bond shall contain in substance the agreement that if any work performed or conducted by the range-hood contractor is in violation of the provisions of this ordinance or of any adopted code, the principal and surety upon such bonds shall be jointly and severally liable to the home owner or any other person contracting for range-hood work, for such amount which is necessary to correct such range-hood work to conform fully with the provisions of this ordinance or any adopted code. Provided, however, such surety company may cancel said bond upon giving 30 days written notice to the Louisville/Jefferson County Code Enforcement. Upon date of expiration, the code official shall cause the contractor's identification to become suspended until such time as satisfactory evidence of a new bond is presented to Code Enforcement.

(B) All licensed vehicles used in the operation of a range-hood contractor are to be properly identified and such identification shall be visible on the outside of the vehicle at all times. The licensed vehicle shall bear the name of the company and identification number. All such identification shall be in letters not smaller than three inches high and must be kept legible at all times.

(C) Identification shall be from March 1 to February 29.

§ 150.089 COMMERCIAL REFRIGERATION APPLIANCE CONTRACTOR IDENTIFICATION REQUIREMENTS.

(A) Any person, firm, partnership or corporation applying for identification shall, before being granted identification execute and deliver to the director a bond in the minimum sum of \$5,000 payable to the Louisville/Jefferson County Treasurer. Such bond shall be made for use and benefit of the owner or any party of interest in the property where said refrigeration appliance contractor furnishes any materials or performs any service, against loss or damage which may arise by reason of the work done or material furnished in violation of the requirements of any law of the Commonwealth of Kentucky or any ordinance of the Metro Government controlling such work. Such bond shall be executed by each applicant with a recognized and responsible surety company authorized to do business in the Commonwealth of Kentucky as surety thereon. Such bond shall contain in substance the agreement that if any work performed or conducted by the refrigeration appliance contractor is in violation of the provisions of this ordinance or of any adopted code, the principal and surety upon such bonds shall be jointly and severally liable to the home owner or any other person contracting for refrigeration appliance work, for such amount which is necessary to correct such refrigeration appliance work to conform fully with the provisions of this ordinance or any adopted code. Provided, however, such surety company may cancel said bond upon giving 30 days written notice to

Louisville/Jefferson County Code Enforcement. Upon date of expiration, the code official shall cause the contractor's identification to become suspended until such time as satisfactory evidence of a new bond is presented to Code Enforcement.

(B) All licensed vehicles used in the operation of a refrigeration alliance contractor are to be properly identified and such identification shall be visible on the outside of the vehicle at all times. The licensed vehicle shall bear the name of the company and identification number. All such identification shall be in letters not smaller than three inches high and must be kept legible at all times.

(C) Identification shall be from March 1 to February 29.

§ 150.090 FIRE DETECTION CONTRACTORS IDENTIFICATION REQUIREMENTS.

(A) Any person, firm, partnership, or corporation engaged in the installation or repairing of central-station or interconnected fire detection equipment or systems shall be identified. (This shall exclude systems confined to one living quarter.)

(B) All licensed vehicles used in the operation of a fire detection contractor are to be properly identified and such identification shall be visible on the outside of the vehicle at all times. The licensed vehicle shall bear the name of the company and identification number. All such identification shall be in letters not smaller than three inches high and must be kept legible at all times.

(C) Identification shall be from May 1 to April 30.

§ 150.091 FIRE SUPPRESSION CONTRACTORS IDENTIFICATION REQUIREMENTS.

(A) Any person, firm, partnership or corporation engaged in the installation or repair of fire suppression equipment or systems shall be identified.

(B) Each applicant must furnish the Louisville/Jefferson County Code Enforcement with a copy of his/her current State of Kentucky Suppression Contractors license.

(C) Exemption: Any application for a sprinkler system with ten or less sprinklers on a domestic water system shall not require an identified contractor.

(D) All licensed vehicles used in the operation of a fire suppression contractor are to be properly identified and such identification shall be visible on the outside of the vehicle at all times. The licensed vehicle shall bear the name of the company and identification number. All such identification shall be in letters not smaller than three inches high and must be kept legible at all times.

(E) Identification shall be from May 1 to April 30.

§ 150.092 MOVING CONTRACTOR IDENTIFICATION REQUIREMENTS.

(A) Any person, firm, partnership or corporation engaged in the moving of buildings or structures shall be identified.

(B) All licensed vehicles used in the operation of a moving contractor are to be properly identified and such identification shall be visible on the outside of the vehicle at all times. The licensed vehicle shall bear the name of the company and identification number. All such identification shall be in letters not smaller than three inches high and must be kept legible at all times.

(C) Identification shall be from May 1 to April 30.

§ 150.093 SIGN CONTRACTOR IDENTIFICATION REQUIREMENTS.

(A) Any person, firm, partnership or corporation engaged in the for-profit installation or repairing of signs or outdoor advertising as defined in the Louisville/Jefferson County Development Code shall be identified.

(B) All licensed vehicles used in the operation of a sign contractor are to be properly identified and such identification shall be visible on the outside of the vehicle at all times. The licensed vehicle shall bear the name of the company and identification number. All such identification shall be in letters not smaller than three inches high and must be kept legible at all times.

(C) Identification shall be from May 1 to April 30.

§ 150.094 WRECKING CONTRACTOR IDENTIFICATION AND LICENSE REQUIREMENTS.

(A) Each identified wrecking contractor must have a wrecking licensee as a full time employee.

(B) All licensed vehicles used in the operation of a wrecking contractor are to be properly identified and such identification shall be visible on the outside of the vehicle at all times. The licensed vehicle shall bear the name of the company and identification number. All such identification shall be in letters not smaller than three inches high and must be kept legible at all times.

(C) There shall be two types of wrecking contractors.

(1) Type "A" identification shall be for contractors wrecking structures less than 35 feet in height, or two stories, and/or less than 3,000 square feet.

(2) Type "B" identification shall be for contractors wrecking structures that do not meet the requirements of type "A" listed above.

(D) Each identified wrecking contractor shall provide a bond as follows:

(1) Any person, firm, partnership or corporation applying for a type "A" wrecking contractor identified shall, before being granted identification, execute and deliver to the Director of Code Enforcement a bond in the minimum sum of \$5,000 payable to Louisville Metro. Such bond shall be made for use and benefit of the owner or any party of interest in the property where said wrecking contractor furnishes any materials or performs any service, against loss or damage which may arise by reason of the work done or material furnished in violation of the requirements of any law of the Commonwealth of Kentucky or any ordinance of Louisville Metro. Such bond shall be executed by each applicant with a recognized and responsible surety company authorized to do business in

the Commonwealth of Kentucky as surety thereon. Such bond shall contain in substance the agreement that if any work performed or conducted by the wrecking contractor is in violation of the provisions of this section or of any adopted code, the principal and surety upon such bonds shall be jointly and severally liable to the home owner or any other person contracting for wrecking or demolition of a building or structure, for such amount which is necessary to correct such wrecking or demolition to conform fully with the provisions of this ordinance or any adopted code. Provided, however, such surety company may cancel said bond upon giving 30 days' written notice to Louisville Metro. Upon date of expiration, the code official shall cause the contractor's identification to become suspended until such time as satisfactory evidence of a new bond is presented to Code Enforcement.

(2) Any person, firm, partnership, or corporation applying for a type "B" wrecking contractor identification shall, before being granted identification, execute and deliver to the Director of Code Enforcement a bond in the minimum sum of \$25,000 payable to Louisville Metro. Such bond shall be made for use and benefit of the owner or any party of interest in the property where said wrecking contractor furnishes any materials or performs any service, against loss or damage which may arise by reason of the work done or material furnished in violation of the requirements of any law of the Commonwealth of Kentucky or any ordinance of Louisville Metro. Such bond shall be executed by each applicant with a recognized and responsible surety company authorized to do business in the Commonwealth of Kentucky as surety thereon. Such bond shall contain in

substance the agreement that if any work performed or conducted by the wrecking contractor is in violation of the provisions of this section or of any adopted code, the principal and surety upon such bonds shall be jointly and severally liable to the homeowner or any other person contracting for wrecking or demolition of a building or structure, for such amount which is necessary to correct such wrecking or demolition to conform fully with the provisions of this ordinance or any adopted code, provided, however, such surety company may cancel said bond upon giving 30 days' written notice to Louisville Metro. Upon date of expiration, the code official shall cause the contractor's identification to become suspended until such time as satisfactory evidence of a new bond is presented to Code Enforcement.

(E) The identified wrecking contractor shall also file with the Code Enforcement a certificate of insurance verifying that the identified contractor has currently in force a comprehensive general liability and property damage insurance policy naming the identified contractor and Louisville Metro as the insured, and providing for the payment of any liability imposed by law on such identified contractor and/or Louisville Metro to the following minimum requirements:

(1) Type "A" identified contractors shall be insured to the extent of:

(a) Not less than \$300,000 for bodily injury or property damage for any one occurrence and aggregate, due to the wrecking of buildings or other structures;

(b) Not less than \$300,000 for bodily injury or property damage resulting from the completed operations hazard; and

(c) Such policy shall not contain a ball and chain exclusion.

(2) Type "B" identified contractors shall be insured to the extent of:

(a) Not less than \$1,000,000 for bodily injury or property damage for any one occurrence and aggregate, due to the wrecking of buildings and other structures;

(b) Not less than \$1,000,000 for bodily injury or property damage resulting from the completed operations hazard due to wrecking of buildings and other structures; and

(c) Such policy shall not contain a ball and chain exclusion.

(F) Identification shall be from May 1 to April 30.

(G) The Director shall require each wrecking licensee to pass a written examination establishing in a manner satisfactory to the Director that the wrecking licensee has the necessary knowledge of the ordinance provisions relating to wrecking, the principles and practices of wrecking operations, and the obligations of a wrecking licensee.

(H) The Director shall refuse to issue the license if he finds the wrecking licensee is not fit or qualified or is not suitable to engage in wrecking operation.

(I) The wrecking licensee may be only affiliated with one identified contractor.

(J) The wrecking licensee must submit a duly notarized application wherein all pertinent information and experience shall be included, and satisfactory proof that the applicant has been engaged in the business of wrecking buildings or structures for a period of one year in a supervisory capacity.

(K) Licensing shall be from May 1 to April 30.

§ 150.095 IDENTIFICATION, LICENSE AND IDENTIFICATION FEES; PAYMENT.

(A) The fee for building contractors identification shall be as follows:

(1) The fee for Type "A" building contractor's identification shall be \$125 per year for obtaining more than four permits a year.

(2) The fee for Type "B" building contractor's limited identification shall be \$50.

(B) The fee for an **electrical** contractor's identification number shall be \$125 per year.

(C) *Master electrician.*

(1) The license fee shall be \$75 per year.

(2) The fee for the license examination shall be as set by the National Testing Service.

(D) The fee for HVAC Contractor's identification number shall be \$125 per year.

(E) *HVAC licensee.*

(1) The license fee shall be \$75 per year.

(2) The fee for a license examination shall be \$75.

(F) The fee for a solid fuel burning appliance contractor identification number shall be \$75 per year.

(G) The fee for a range-hood contractor identification number shall be \$75.

(H) The fee for a refrigeration appliance contractor identification number shall be \$75 per year.

(I) The fee for a fire detection contractor identification number shall be \$75.

(J) The fee for a fire suppression contractor identification number shall be \$75 per year.

(K) The fee for moving contractor identification number shall be \$75 per year.

(L) The fee for wrecking or demolition licenses and identification number shall be as follows:

(1) The fee for a Type "A" wrecking contractor's identification number shall be \$125 per year.

(2) The fee for Type "B" wrecking contractor's identification shall be \$225 per year.

(M) The fee for a wrecking or demolition license.

(1) The license fee shall be \$75 per year.

(2) The fee for the wrecking licensee's examination shall be \$75 per examination.

(N) The fee for a Sign Contractor's identification number shall be \$125 per year.

(O) All identification and licenses shall be paid in full. Except as required for implementing this ordinance, no identification or license fee will be prorated. During implementation only, if there is less than six months before expiration, an additional 12 months may be paid.

§ 150.096 PERMITS AND INSPECTION FEES.

The following fees shall be charged and collected for inspections and permits issued or made by or under the authority of Metro Code Enforcement.

(A) *Building Permit Fees.*

(1) The permit fees for new construction, additions, complete alterations of an entire building, tents and other temporary structures and change of Kentucky Building Code Use Group Classification permits shall be calculated according to the following table.

<i>Kentucky Building Code</i>	<i>Per</i>
<i>Use Group Classification</i>	<i>Square Foot</i>
A-1 Assembly; theaters	\$ 0.08
A-2 Assembly; night clubs	0.10
A-3 Assembly; recreation centers	0.08
A-4 Assembly; churches	0.08
B Business	0.06
E Educational	0.06
F-1 Factory; low hazard	0.06
H High hazard	0.10
I-1 Institutional; residential care	0.06
I-2 Institutional; incapacitated	0.06

I-3	Institutional; restrained	0.06
M	Mercantile	0.06
R-1	Residential; hotels	0.06
R-2	Residential; multi-family	0.06
R-3	Residential; one- and two-family	0.06
S-1	Storage; moderate	0.06
S-2	Storage; low	0.06
U	Utility; miscellaneous	0.04

(2) Square footage shall be based on the number of square feet on every floor, including all finished portions of basements, calculated to the outside of the exterior walls.

(3) The fee for partial alterations, structures other than buildings, or any type of work that the square feet cannot be calculated, the fee shall be calculated by a reasonable estimated cost to be submitted by the applicant. The fee shall be \$15 plus \$2 per \$1,000 of estimated cost.

(4) Any permit issued by Code Enforcement for which the Commonwealth of Kentucky is responsible for conducting the required building inspections, shall be ½ the normal amount.

(5) A plan review fee shall be charged for all applications that are reviewed without issuance of a building permit. The plan review fee shall be the normal permit fee.

(6) A fee shall not be charged for fire damaged structures if the work proposed is to repair fire damage only. A copy of the fire run report shall be furnished to Code Enforcement upon application.

(7) The fee for a "foundation only" permit shall be \$30.

(8) There shall be a building permit extension fee charge of \$30 for every approved request for an extension of a valid building permit beyond the one year permit term.

(9) Permit fees for metropolitan owned projects may be waived by agreement of the Director of Public Works and the Administrator of Louisville/Jefferson County Code Enforcement.

(10) The administrative fee for a Certificate of Use and Occupancy without issuance of a building permit, shall be \$30.

(11) No building permit fee calculated under this section shall be less than \$30.

(12) The fee for any additional inspections not covered by the initial permit fee shall be \$30. Code Enforcement shall have the right not to issue any

additional permits to the applicant until the additional inspection fees have been paid in full.

(13) Before a building permit is issued by Code Enforcement for a one or two-family residential construction project or a multi-family residential construction project, Code Enforcement shall conduct a search of its records to determine if the applicant has any unresolved or uncured and outstanding Code violations. If the applicant has no such unresolved or uncured and outstanding Code violations, then Code Enforcement may issue the building permit, if otherwise appropriate. If the applicant has unresolved or uncured and outstanding Code violations prior to the issuance of a Certificate of Occupancy, Code Enforcement shall not issue a building permit until such time as all the outstanding Code violations are removed, cured or corrected by the applicant.

(14) When an applicant obtains a building permit from Code Enforcement for a one or two family residential construction project or a multi-family residential construction project that requires a Certificate of Occupancy, a Certificate of Occupancy Public Notice shall be affixed to the outside face of the electrical service panel door prior to the final electrical inspection. The Certificate of Occupancy Public Notice shall be in the form required by Code Enforcement, and shall contain the following minimum information:

(a) The name and address of the building contractor; and

(b) The building contractor identification number issued to the building contractor by Code Enforcement; and

(c) A statement to the effect that the project is not suitable for occupancy until such time as Code Enforcement issues a Certificate of Occupancy for the structure.

No person shall remove the Certificate of Occupancy Public Notice until a Certificate of Occupancy is properly issued for the building for which the building permit application was filed. Upon issuance of a valid Certificate of Occupancy for the subject property, the Certificate of Occupancy Public Notice may be removed.

(15) Electrical *permit fees*.

(a) The fees for initial installation of electrical wiring in one or two family residence shall be \$130. This permit fee shall include two inspections.

(b) The fee for a rewire, burnout, new service, repairs or additional wiring in a one or two family residence shall be \$40. This permit fee shall include one inspection.

(c) The fee for installation of new electrical wiring other than in a one or two family residence shall be \$40 for the base permit, \$20 for each subpanel, \$20 for each dwelling unit in a residential structures other than one or two family residences, and \$.25 for each ampere at the service entrance up to and including

600 amperes. The fee shall be \$.50 for each ampere over 600 amperes. This permit fee shall include two inspections.

(d) The fee for rewiring, burnout, new service or repairs in other than one or two family residences shall be \$40 plus an additional \$20 per each dwelling unit specifically involved in the work for residential property, or \$20 per each subpanel specifically involved in the work for commercial property. This permit fee shall include one inspection.

(e) The fee for the installation of a temporary pole shall be \$40. This permit fee shall include one inspection.

(f) The fee for any additional inspections not covered by the initial permit fee shall be \$30. Code Enforcement shall have the right not to issue any additional permits to the applicant until the additional inspection fees have been paid in full.

(16) *Heating, ventilation and air conditioning (HVAC) permit fees.*

(a) The fee for HVAC installation, replacements and repairs in one and two family residences shall be as follows:

i. The fee for the installation, replacement or addition of heating equipment shall be \$20.

ii. The fee for the installation, replacement or addition of cooling equipment shall be \$20.

iii. The fee for the installation, replacement or addition of combination heating and cooling equipment shall be \$30.

iv. The permit fee charged for the installation, replacement or addition of solid fuel burning equipment shall be \$30.

(b) The fee for the installation of HVAC equipment in residential buildings with three or more units shall be as follows:

i. The fee for the installation, replacement or addition of heating equipment in multi-family residences shall be \$20 per dwelling unit.

ii. The fee for the installation, replacement or addition of cooling equipment in multi-family residences shall be \$20 per dwelling unit.

iii. The fee for the installation, replacement or addition of combination heating and cooling equipment shall be \$30 per dwelling unit.

iv. The permit fee charged by the installation, replacement or addition of solid fuel burning equipment shall be \$20.

v. The fee for the installation, replacement or addition of a boiler shall be \$20 plus \$1 for each radiator or fin tube connector.

(c) The fee for installation of HVAC equipment in structures other than residential shall be as follows:

i. The fee for HVAC equipment shall be \$20 for the first apparatus, \$5 for each additional apparatus plus \$1 for each duct opening.

ii. The fee for the installation, replacement or addition of a range hood shall be \$30.

iii. The fee for the installation, replacement or addition of a chiller shall be \$30.

iv. The fee for the installation, replacement or addition of a commercial dryer shall be \$30.

v. The fee for the installation, replacement or addition of a roof top unit shall be \$45 per unit.

vi. The permit fee charged for the installation, replacement or addition of solid fuel burning equipment shall be \$30.

vii. The permit fee charged for the installation, replacement or addition of mechanical refrigeration equipment shall be \$30 the first 100 tons.

1. The excess over 100 tons, but less than 501 tons, the fee shall be \$50.

2. The excess over 500 tons, the fee shall be \$75.

(d) The fee for any additional inspections not covered by the initial permit fee shall be \$15. Code Enforcement shall have the right not to issue any

additional permits to the applicant until the additional inspection fees have been paid in full.

(17) *Fire detection and suppression permit fees.*

(a) The fee for the installation and or replacement of a sprinkler system shall be as follows:

i. Fifty five dollars for the first 200 sprinklers plus \$.10 for each sprinkler over 200, but less than 400 sprinklers.

ii. The fee for a sprinkler system for 400 or more sprinklers shall be \$110 plus \$.10 for each sprinkler over 750.

(b) The fee for automatic and/or manual fire detection systems shall be as follows:

i. The fee shall be \$10 per 5,000 square feet, or fraction thereof, up to 70,000 square feet.

ii. The fee for over 70,000 square feet shall be \$150 plus \$15 for each additional 20,000 square feet or fraction thereof.

(c) The fee for a standpipe shall be \$35 each. If a combination standpipe and sprinkler system is installed the fee shall be calculated by subsection (D)(2).

(d) The fee for a carbon dioxide fire suppression system shall be \$55 for the first 200 pounds of agent plus \$.02 for every pound in excess of 200 pounds.

(e) The fee for a halon suppression system shall be \$55 for the first 35 pounds of agent plus \$.05 for each pound of agent in excess of 35 pounds.

(f) The fee for a foam suppression system shall be \$1 per gallon of foam concentrate. The minimum fee shall be \$50; the maximum fee shall be \$1,000.

(g) The fee for a range hood suppression system shall be \$30.

(h) The fee for a dry chemical suppression system shall be \$35 for the first 30 pounds of agent plus \$.20 for each pound in excess of 30 pounds.

(i) The fee for a flammable liquid or pressure tank shall be \$30 for the first tank plus \$5 for each additional tank located in the same building.

(18) *Moving permit fees.*

(a) The fee for moving a building to a permanent site shall be \$210.

(b) The fee for moving a building to a temporary storage site shall be \$210.

(c) The person responsible for moving a structure shall submit with the moving permit application a Certificate of Liability Insurance for an amount

not less than \$500,000 insuring against any and all damage caused by said moving.

(19) *Wrecking or demolition permit fees.*

(a) The building official shall issue three types of wrecking permits which shall be classified as Type "A", Type "B" and Type "C".

i. Type "A" permits shall be for any structure of not more than two stories or 35 feet in height and contains less than 3,000 square feet of floor space (total square feet of all floors).

ii. Type "B" permits shall be for any structure that does not meet the criteria of Type "A" permits.

iii. Type "C" permits shall be for any structure of not more than one story or 25 feet in height or more than 1,500 square feet of floor space. Type "C" permits shall be property owner permit only. Any permit that meets the requirement of a Type "C" permit and is applied for by a licensed wrecking contractor shall be considered a Type "A" permit.

(b) The fee for Type "A" wrecking permits shall be \$30 for the first 1,000 square feet plus \$10 for each additional 1,000 square feet or fraction thereof.

(c) The fee for Type "B" wrecking permits shall be \$55 for the first 1,000 square feet plus \$10 for each additional 1,000 square feet or fraction thereof.

(d) The fee for Type "C" wrecking permits shall be the same as Type "A" wrecking permits.

(e) All applicants obtaining a Type "C" wrecking permit shall post a \$500 cash or certified check bond as security conditional upon proper completion of the work.

i. The cash bond shall be returned to the applicant upon proper completion of the work. However, should the applicant not properly complete the demolition of the building, including the required cleaning, grade restoration and seeding within 60 days from the date of the issuance of the permit, the applicant shall forfeit the bond unless an extension of time is granted in writing by the director for good cause. Any such extension must be requested in writing at least three working days before the expiration of the 60 days period.

ii. The director is empowered to waive the required cash bond for structures without a basement.

(f) The fee for each 30 days of extension time shall be \$15.

(g) The fee for any extension applied for less than three days prior to the expiration of the permit shall be $\frac{1}{2}$ the original permit fee not to exceed \$100.

(h) In cases where a permit fee was waived or not charged, the fee for an extension applied for less than three days prior to the expiration of the permit shall be ½ the permit fee that would have been charged had not the original permit fee been waived or not charged, not to exceed \$100.

(20) *Sign permit fees.* The fee for a sign permit shall be \$.50 per square foot of each face as defined in the Louisville/Jefferson County Development Code.

(21) *Parking lot permit fees.* The fee for the original construction of a parking lot or expansion of an existing parking lot shall be \$30 for the first ten spaces plus an additional charge of \$.25 for each additional space over ten spaces.

(22) *Tax moratorium fees.* The administrative fee for a tax moratorium application shall be \$45 for each property. The fee shall be shared equally by the Louisville/Jefferson County Code Enforcement, and the Property Valuation Administration. This fee shall be charged regardless of approval of the application.

(23) *Penalty fee.*

(a) A penalty fee shall be assessed for starting work without a permit. The penalty fee shall be the same amount as the standard fee, but not less than \$100. The penalty fee shall be paid in addition to the standard fee.

(b) In cases where a permit fee was legally waived, the penalty fee shall be assessed upon the above criteria as if the standard fee had been assessed.

(24) *Administration fee.*

(a) An administration fee in the amount of \$30 shall be charged to an applicant for obtaining other permits prior to issuance of the building permit as required by the Ordinance.

(b) An administrative fee in the amount of \$30 shall be charged to an applicant for failure to note on a permit application the previously issued building permit number, if any, for the building or structure noted on said permit application.

(c) An administrative fee in the amount of \$55 shall be charged for the administrative costs of the required legal advertisements for the demolition of contributing buildings or structures which are listed on the National Register of Historic Places.

(d) An administrative fee in the amount of \$45 shall be assessed for each property listed by the applicant on an Assessment/Reassessment Moratorium Certificate Application Form. The administrative fee shall be charged regardless of approval of the application. The administrative fee shall be shared equally by Code Enforcement, and the Property Valuation Administration.

§ 150.998 SEVERABILITY.

If any provision of this chapter as now or later amended or its application to any person or circumstance is held invalid, the invalidity does not affect other provisions that can be given effect without the invalid provision or application.

§ 150.999 PENALTY.

(A) Except as provided in subsection (B), any person, firm, partnership or corporation violating any of the provisions of this chapter shall be guilty of a misdemeanor, and upon conviction thereof shall be punished by a fine of not less than \$30 nor more than \$1,000 or by imprisonment of a period of not more than 50 days, or both such fine and imprisonment for each offense. Each day the violation continues shall be a separate offense. No additional notice other than the notice for the original offense shall be required to convict a person, firm, partnership or corporation for such violations resulting from a continuation of such offense.

(B) Any person, firm, partnership, corporation or other legal entity violating any provisions of § 150.110 shall be guilty of a misdemeanor, and upon conviction thereof shall be punished by a fine of up to \$500 or by imprisonment of a period of not more than 365 days, or both such fine and imprisonment for each offense. Each day the violation continues shall be a separate offense. No additional notice other than the notice for the original offense shall be required to convict a person, firm partnership, corporation or other legal entity for such violations resulting from a continuation of such offense.

SECTION II. Section 150.004 and the Appendix: Solar Heating, Cooling and Hot Water of the Code are hereby deleted as follows:

~~§ 150.004 SOLAR HEATING, COOLING AND HOT WATER SYSTEMS.~~

~~—Regulations concerning the solar heating, cooling and hot water systems which were adopted by Ordinance 17-1981 are contained in the appendix following this ordinance.~~

~~APPENDIX: SOLAR HEATING, COOLING AND HOT WATER~~

~~§ 2100.01 SCOPE.~~

~~—These recommended requirements, including the Appendices, apply to the construction, alteration, moving, demolition, repair and use of solar energy systems and parts thereof used for space and process heating and cooling and for water heating in, on or adjacent to buildings and appurtenant structures.~~

~~§ 2100.02 PURPOSE.~~

~~—The purpose of the recommended requirements is to provide for reasonable protection of the public health and safety, while at the same time encouraging consumers, builders, designers, manufacturers, installers and others to utilize solar energy technologies while permitting experimentation and innovation.~~

~~§ 2100.03 EXISTING BUILDINGS.~~

~~—Solar energy systems may be installed in, on, or adjacent to existing buildings or appurtenant structures without having the entire building or structure comply~~

~~as required for new construction, provided the added solar energy systems and the affected portions of the existing building, mechanical, plumbing and electrical systems comply with the applicable provisions of these recommended requirements, the Kentucky Building Code and other appropriate codes and ordinances.~~

~~§ 2100.04 EXISTING SOLAR ENERGY SYSTEM.~~

~~—(A)— Existing solar energy systems shall be permitted to have their existing use continued provided their use and maintenance is not a hazard to life, health or property.~~

~~—(B)— Conditions that endanger life, limb, health or property shall be abated by repair, rehabilitation, demolition, or removal in accordance with the provisions of these recommended requirements, the Kentucky Building Code or the reference standards set forth in the Appendices.~~

~~§ 2100.05 MAINTENANCE.~~

~~—Solar energy systems shall be maintained in accordance with the Kentucky Building Code.~~

~~§ 2100.06 IDENTIFICATION.~~

~~—Materials and equipment shall bear the manufacturer's or installer's label or otherwise be identifiable in accordance with the Kentucky Building Code and other appropriate codes and ordinances.~~

~~§ 2100.10 THE KENTUCKY BUILDING CODE.~~

~~— (A) — Nothing in this ordinance shall be construed as superseding the Kentucky Building Code. If any section is determined by the enforcing agency or a court of law to conflict with the Kentucky Building Code, the Kentucky Building Code shall control.~~

~~— (B) — This ordinance supplements the Kentucky Building Code and all builders must comply with the Kentucky Building Code as well as this ordinance when constructing solar heating, cooling and hot water systems.~~

~~§ 2100.20 ALTERNATE MATERIALS AND METHODS OF CONSTRUCTION.~~

~~— The provisions of these recommended requirements are not intended to prevent the use of any solar energy system or component, provided such system or component is determined to be at least equivalent by the enforcing agency in health and life safety to the solar energy systems and components permitted herein.~~

~~§ 2100.30 PLANS, PERMITS AND INSPECTIONS.~~

~~§ 2100.31 PLANS.~~

~~— Plans and specifications shall be submitted in accordance with the Kentucky Building Code.~~

~~§ 2100.32 PERMITS.~~

~~—Permits shall be required in accordance with the Kentucky Building Code.~~

~~§ 2100.33 CALLED INSPECTIONS.~~

~~—Called inspections shall be made in accordance with the Kentucky Building Code.~~

~~§ 2100.34 FINAL INSPECTION.~~

~~—Final inspection shall be provided in accordance with the Kentucky Building Code.~~

~~2101.00 DEFINITIONS~~

~~§ 2101.01 GENERAL.~~

~~—For the purpose of these recommended requirements, certain terms, words, phrases and their derivatives shall be construed as set forth in this ordinance. Words used in the singular include the plural, and the plural, the singular. Words used in the masculine gender include the feminine and the feminine, the masculine.~~

~~§ 2101.02 TERMS NOT DEFINED.~~

~~Where terms are not defined herein or in the Kentucky Building Code or the applicable standard, their ordinary dictionary meaning within the context of the sentence shall apply.~~

~~§ 2101.03 CONFLICTS.~~

~~Where conflicts occur between definitions contained herein and referenced standards, the definitions in the referenced standard shall apply to that standard.~~

~~§ 2101.10 DEFINITIONS.~~

~~**ACCESSIBLE.** Permitting close approach which may require removal or opening of an access panel, door or similar obstruction.~~

~~**ACCESSIBLE, READILY.** Direct access without the necessity of removing or opening any panel, door or similar obstruction.~~

~~**ADVERSELY AFFECTED.** Having been interfered with in a manner or to an extent which may result in a hazard.~~

~~**APPROVED.** As to materials, equipment and method of construction, refers to approval by the enforcement agency as the result of investigation by that agency or by reason of accepted principles or tests, by national authorities, technical or scientific organizations.~~

— ~~**AUTOMATIC.** Self-acting, operating by its own mechanism when activated by some impersonal influence.~~

— ~~**AUXILIARY ENERGY SYSTEMS.** Equipment utilizing energy other than solar both to supplement the output provided by the solar energy system as required by the design conditions and intended to provide energy backup requirements during periods when the solar energy system may need supplementary assistance to maintain design temperature or may be inoperable. (Also called a "backup system.")~~

— ~~**COLLECTOR, SOLAR.** A component used for absorbing solar radiation, and converting it into useful thermal energy and for transferring the thermal energy to a heat transfer medium.~~

— ~~**COMBUSTIBLE LIQUID.** See **LIQUID.**~~

— ~~**COMPONENT.** A distinct device or assembly that forms part of a more complex system.~~

— ~~**CONTROL SUBSYSTEM.** The assembly of devices and their electrical, pneumatic or hydraulic auxiliaries used to regulate the process of collecting, transporting, storing and utilizing energy in response to the thermal, safety and health requirements of the building occupants.~~

~~— **CORROSIVE LIQUIDS.** Liquids which when in contact with living tissue will cause damage to such tissue, or which will ignite when in contact with organic matter or other chemicals.~~

~~— **DISTRIBUTION SYSTEM.** That portion of a solar energy system which contains a heat transfer medium and moves energy throughout the system through ducts, pipes and other means.~~

~~— **FIRE SEPARATION AREA.** Any open exterior space which is required by the building code for access or for protection of a building by isolation.~~

~~— **FLAMMABLE LIQUID.** See **LIQUID.**~~

~~— **FLASH POINT.** The minimum temperature at which a liquid gives off vapor in sufficient concentration to form an ignitable mixture with air near the surface of the liquid within the vessel as specified by appropriate test procedure and apparatus as follows:~~

~~—— (1) The flash point of a liquid having a viscosity less than 45 SUS at 100° F. and a flash point below 200° F. shall be determined in accordance with the "Standard Method of Test for Flash Point by the Tag Closed Tester," ASTM D-56-77.~~

~~—— (2) The flash point of a liquid having a viscosity of 45 SUS or more at 100° F. or a flash point of 200° F. or higher shall be determined in accordance~~

with the "Standard Method of Test for Flash Point by Pensky-Martens Closed Tester," ASTM D-93-77.

— ~~**HEAT TRANSFER FLUID.**~~ A liquid or gas used to transfer heat from one medium to another or to transfer thermal energy between components.

— ~~**LISTED.**~~ Equipment or materials included in a list published by a nationally recognized testing laboratory, inspection agency or other organization concerned with product evaluation that maintains periodic inspection of production of listed equipment or materials, and whose listing states either that the equipment or materials meets nationally recognized standards or has been tested and found suitable for use in a specified manner.

— ~~**LIQUID.**~~ Any material which has a fluidity greater than that of 300 penetration asphalt when tested in accordance with "Test for Penetration for Bituminous Materials," ASTM D-5-73 (1978). When not otherwise identified, the term liquid shall mean both flammable and combustible liquids.

— (1) — ~~**COMBUSTIBLE LIQUID.**~~ A liquid having a flash point at or above 100°F.

— (2) — ~~**FLAMMABLE LIQUID.**~~ A liquid having a flash point below 100°F. and having a vapor pressure not exceeding 40 pounds per square inch (absolute) at 100°F.

— ~~**MAINTENANCE.** Any procedure required to keep equipment operating in accordance with these recommended requirements.~~

— ~~**MANUAL.** Operated by personal intervention; also called non-automatic.~~

— ~~**MAXIMUM ALLOWABLE PRESSURE.** The maximum gauge pressure permitted in a system and the basis for the pressure setting of the pressure relieving devices protecting the system.~~

— ~~**MAXIMUM ALLOWABLE TEMPERATURE.** The maximum temperature permitted in a system, and the basis for the temperature setting of the temperature relieving devices protecting the system.~~

— ~~**MAXIMUM OPERATING TEMPERATURE.** The temperature of the heat transfer fluid at the outlet manifold of the solar energy collector during sustained operation in outdoor conditions of maximum ambient temperatures and solar insulation.~~

— ~~**NON-POTABLE.** A fluid containing harmful substances but not in sufficient quantity to be classified as toxic.~~

— ~~**PLASTIC - CC 1.** Plastic materials which have a burning extent of one-inch or less when tested in nominal 0.060-inch thickness by ASTM D-635-77, "Test for Rate of Burning and/or Extent and Time of Burning of Self-Supporting Plastics in a Horizontal Position" or in the thickness intended for use.~~

~~— **PLASTIC - CC 2.** Plastic materials which have a burning rate of 2.5 inch per minute or less when tested in nominal 0.060-inch thickness by ASTM D-635-77, "Test for Rate of Burning and/or Extent and Time of Burning of Self-Supporting Plastics in a Horizontal Position" or in the thickness intended for use.~~

~~— **PROCESSING PURPOSES.** Any direct thermal use of solar energy except space heating and cooling and domestic water heating.~~

~~— **SOLAR ENERGY SYSTEM.** A complete assembly of components, equipment, controls, interconnecting means and terminal elements needed to convert solar energy into thermal energy for space heating or cooling, water heating or processing purposes.~~

~~— **SOLAR STORAGE SUBSYSTEM.** The assembly used for storing thermal energy so that it can be used when required.~~

~~— **SUBSYSTEM.** A major, separable, functional assembly of a system such as complete collector or storage assembly.~~

~~— **SUSTAINED OPERATION.** That period of solar energy system operation after start-up transients have subsided.~~

~~— **TOXIC.** Any substance (other than a radioactive substance) which has the capacity to produce personal injury or illness to man through ingestion, inhalation, or absorption through any body surface, of any substance producing a~~

~~lethal dose in half (LD50) of white rat when ingested as a single dose of from 50 mg to 5g per kg of body weight.~~

~~———— (1) ——— When applied to a refrigerant used as a heat transfer fluid any refrigerant classified as a Group I Refrigerant is considered non-toxic.~~

~~———— (2) ——— Other refrigerants used as heat transfer fluids are considered toxic if their gas or vapor produces death or serious injury in guinea pigs during a two-hour exposure to the gas or vapor at a concentration of 2½% of volume of air.~~

~~2102.00 BUILDING~~

~~§ 2102.01 SCOPE.~~

~~———— The provisions of this ordinance shall apply to the design, construction, installation, alteration, materials, location, repair and removal of solar systems and accessories connected, attached or adjacent to a building or structure. The provisions of this ordinance relate to solar energy systems and component requirements similar to those provided in the building code.~~

~~§ 2102.02 BUILDING COMPONENTS FUNCTIONING AS SOLAR COMPONENTS (INCLUDING HYBRID AND PASSIVE SYSTEMS).~~

~~———— Solar components functioning as building components shall comply with the applicable provisions of the Kentucky Building Code.~~

~~2102.10 ACCESS, LOCATION AND CLEARANCES~~

~~§ 2102.11 ACCESS.~~

~~— Solar energy system components shall be accessible for required routine maintenance without trespassing on adjoining property or disassembling any major portion of the structure of a building or appurtenance.~~

~~§ 2102.12 LOCATION.~~

~~— (A) Solar energy system components shall not be located in fire separation areas.~~

~~— (B) Solar energy system components shall not be located so as to interfere with the operation of required doors, windows, or other building components.~~

~~— (C) Provisions shall be made over pedestrian and vehicular ways to protect those areas from sliding snow or ice.~~

~~— (D) Solar energy system components may be subject to local zoning requirements.~~

~~§ 2102.13 CLEARANCES.~~

~~— (A) Combustible materials shall not be exposed to components having operating temperatures that can cause ignition. Clearances to combustible materials specified in the component listing and marking shall be maintained.~~

~~— (B) Clearance between combustible materials and unlisted components shall be maintained in accordance with the following:~~

~~_____ **Installation Clearances**~~

Maximum	Surface	Temperature	Required
			Clearance
			(Inches)
200° F. or less			0
200° to 250°			1
250° F. to 500° F.			6
Over 500° F.			§ 2102.13(A) applies

~~**§ 2102.20 MATERIAL TESTS AND STANDARDS.**~~

~~_____ The enforcement agency may require tests in accordance with the Kentucky Building Code.~~

~~**§ 2102.30 THERMAL INSULATION.**~~

~~_____ Application of building thermal insulation in solar systems and components shall comply with the Kentucky Building Code and the BOCA Basic Energy Code.~~

~~**§ 2102.40 PROTECTION AGAINST VERMIN OR RODENTS.**~~

~~_____ Protection against the passage of vermin or rodents shall be in accordance with the Kentucky Building Code.~~

~~§ 2102.50 PROTECTION OF SOLAR SYSTEMS.~~

~~—Component parts of solar energy systems exposed to vehicular traffic shall be protected against damage.~~

~~§ 2102.60 PROTECTION AGAINST WATER PENETRATION.~~

~~—Protection against water penetration around openings and extensions of solar components through the roof, floors and walls shall be in accordance with the Kentucky Building Code.~~

~~2102.70 COLLECTORS, DISTRIBUTION AND CONTROL SYSTEMS AND STORAGE SYSTEMS.~~

~~§ 2102.71 FIRE SAFETY REQUIREMENTS.~~

~~—(A)—Collectors located above or upon a roof shall not reduce the required fire resistance classification of the roof covering materials.~~

~~—(B)—The installation of solar energy components shall not reduce the required fire safety of a building. All solar energy component installations shall be in accordance with Article 8 and Article 9 of the Kentucky Building Code.~~

~~—(C)—The installation of solar energy components shall not reduce the required safety of a building. All solar energy component installations shall be in accordance with the Kentucky Building Code.~~

~~§ 2102.72 STRUCTURAL.~~

~~— (A) — The collector, the solar energy support systems and their supporting structures, including building components, shall be designed and constructed to support the following loads:~~

~~—— (1) — Dead load of the collector, components and transfer liquids.~~

~~—— (2) — Live loads required by Article 8, Section 710, of the Kentucky Building Code.~~

~~—— (3) — Snow loads required by Article 8, Section 711, of the Kentucky Building Code.~~

~~—— (4) — Wind loads required by Article 8, Section 712-715, of the Kentucky Building Code.~~

~~—— (5) — Seismic loads required by Article 8, Section 716, of the Kentucky Building Code.~~

~~—— (6) — Expansion and contraction loads resulting from temperature changes.~~

~~—— (7) — Combination loads required by Article 8, Section 717, of the Kentucky Building Code.~~

~~— (B) — Excavations adjacent to any footing shall be in accordance with Article 13, Section 1307, of the Kentucky Building Code.~~

~~—(C)— Holes, notches and cuts made in structural elements to allow the passage of solar components, and piping embedded in concrete shall not impair structural integrity and shall conform with the Kentucky Building Code.~~

~~—(D)— Provisions shall be made to assure that any buried storage container will not be floated due to flooding or rises in the water table in accordance with acceptable engineering practice.~~

~~**2102.80 BUILDING COMPONENTS FUNCTIONING
AS SOLAR ENERGY COMPONENTS
(INCLUDING PASSIVE AND HYBRID SYSTEMS)**~~

~~**§ 2102.81 ENERGY CONSERVATION.**~~

~~—(A)— In calculating the actual overall coefficient of heat transfer (U_O) for apertures Resistance (R) of movable insulation may be included, providing the movable insulation is installed as part of the aperture (e.g., shutters, sliding panels, and the like) and sized to cover the aperture area considered to the extent of the U_O required for the building.~~

~~—(B)— In calculating the actual overall thermal transfer value (OTTV) the shade coefficient of the shading devices used (e.g., draperies, blinds, shades, exterior overhangs, and the like) may be included, providing the shading coefficient is calculated in accordance with the provision of Chapter 26 of the 1977 Edition of Handbook of Fundamentals published by the American Society of Heating, Refrigerating and Air-Conditioning Engineers.~~

~~—(C)— In determining compliance of a building design employing solar energy systems with energy conservation requirements, Article 20 of the Kentucky Building Code should be used.~~

~~§ 2102.82 FIRE SAFETY.~~

~~—(A)— *Fire resistance ratings.* A collector intended for installation integral with a part of a building wall or roof assembly is not normally evaluated and tested to determine its fire resistance characteristics against fire originating from sources within the building in which it is installed. Previously tested materials and assemblies may be combined with solar components to meet the required fire-resistance rating as approved by the enforcing agency.~~

~~—(B)— *Roof coverings.* A collector intended for installation integral with a part of the building roof structure shall have the same resistance to fire as required for the adjacent roof covering.~~

~~§ 2102.83 ROOF AND WALL PANELS.~~

~~—Collectors which are integral with a building wall or roof structure and in which the collector covers are light transmitting plastic materials, are classified as a panel and must comply with Article 19 of the Kentucky Building Code.~~

~~2103.00 ELECTRICAL.~~

~~§ 2103.01 SCOPE.~~

~~— (A) — Electrical materials and equipment and their installation shall be in accordance with Reference Standard SS-E-1 of Appendix A.~~

~~— (B) — Those conditions typically encountered in the installation of solar energy systems are covered in this ordinance and the National Electrical Code, incorporated by reference in Article 15 of the Kentucky Building Code. Other methods, materials and subject matter covered in Reference Standard SS-E-1 are also recognized by these recommended requirements.~~

~~§ 2103.02 PREVENTION OF FIRE SPREAD.~~

~~— Electrical installations shall be so made that the possible spread of fire or products of combustion through fire rated, fire resistant or fire stopped walls, partitions, ceilings and floors, hollow spaces; vertical shafts and ventilating or air-handling ducts will not be substantially increased, and shall conform to the requirements of the Kentucky Building Code and the National Electrical Code.~~

~~§ 2103.03 HOLES AND NOTCHES IN STRUCTURAL MEMBERS.~~

~~— Holes and notches in structural members shall be made so as to minimize weakening of the building or structure and shall be in accordance with the Kentucky Building Code and the National Electrical Code. Raceways and cables run through holes or notches shall be protected from physical damage.~~

~~§ 2103.04 LOADS.~~

~~—Electrical equipment shall be supplied by branch circuit, feeder and service equipment and conductors which are adequate for the load and conform to the National Electrical Code as incorporated by the Kentucky Building Code. No existing branch circuit, feeder, or service shall be overloaded.~~

~~§ 2103.05 OVERCURRENT PROTECTION.~~

~~—Conductors and equipment shall be protected against overcurrent in accordance with the National Electrical Code.~~

~~§ 2103.06 GROUNDING.~~

~~—All exposed noncurrent-carrying metal parts of electrical equipment likely to become energized shall be grounded in accordance with the National Electrical Code.~~

~~§ 2103.07 ELECTRICAL CONNECTIONS.~~

~~—Terminals and splicing devices shall be suitable for the size and number of conductors, and the conductor metal in accordance with the National Electrical Code.~~

~~§ 2103.08 IDENTIFICATION OF DISCONNECTING MEANS.~~

~~—Each disconnecting means required by these recommended requirements for motors and appliances, and each service, feeder or branch circuit at the point~~

~~where it originates shall be legibly marked in accordance with the National Electrical Code, unless located and arranged so the purpose is evident. The marking shall be of sufficient durability to withstand the environment involved.~~

~~§ 2103.09 LOCATION WITH RESPECT TO ADVERSE ENVIRONMENTS.~~

~~—Conductors, wiring materials, and equipment shall be inherently suitable or shall be installed in accordance with the National Electrical Code so as to be protected when so located as to be affected by:~~

~~—(A)—High temperatures (particularly at collectors and collector piping) and widely varying temperatures.~~

~~—(B)—Corrosive influences both above and below ground, including those from corrosive heat transfer fluids.~~

~~—(C)—Dampness and wetness.~~

~~§ 2103.10 ACCESS AND LOCATION.~~

~~—Sufficient access and working space shall be provided in accordance with the National Electrical Code and shall be maintained about all electric equipment to permit ready and safe operation and maintenance of such equipment.~~

~~2103.20 MATERIAL TESTS AND SPECIFICATIONS~~

~~§ 2103.21 APPROVED MATERIALS.~~

~~— Products of a type listed by a nationally recognized electrical testing laboratory shall bear the listing mark of such laboratory as set forth in the National Electrical Code. One-of-a-kind equipment, or equipment outside the scope of listing of a nationally recognized electrical testing laboratory may be approved by the enforcement agency.~~

~~§ 2103.22 INSTALLATION AND USE.~~

~~— Listed or labeled equipment shall be used or installed in accordance with any instructions included in the listing or labeling and with the National Electrical Code.~~

~~§ 2103.23 MARKING.~~

~~— Electrical materials and equipment shall be marked with the manufacturer's identification and such electrical ratings as are necessary for proper installation and use, as set forth in the National Electrical Code.~~

~~§ 2103.30 INSTALLATIONS IN DUCTS.~~

~~— Only recognized wiring methods shall be installed within ducts, plenums, and other spaces used for environmental air as set forth in the National Electrical Code. No electrical equipment or devices shall be installed within ducts and plenums except those necessary for their direct action upon, or sensing or the contained air.~~

~~§ 2103.40 CONTROLS.~~

~~— Remote control, signaling, and power limited circuits not an integral part of a device or appliance shall be Class 1, Class 2 or Class 3 as set forth in the National Electrical Code.~~

~~2104.00 MECHANICAL~~

~~§ 2104.01 SCOPE.~~

~~— Solar energy systems using air, liquid, boiling liquid or vapor movement as a means of utilizing solar energy for space cooling or heating for water heating, or for processing purposes shall comply with the applicable requirements of this ordinance.~~

~~§ 2104.02 ALTERNATIVE CONSTRUCTIONS, SYSTEMS AND MATERIALS.~~

~~— (A) — Solar energy components also serving as building components shall comply with the applicable provisions of § 2102.01 and when connected to heating, ventilating, air conditioning and plumbing systems shall also comply with the applicable provisions of this ordinance.~~

~~— (B) — Solar energy systems using flammable liquids and gases such as methanol, natural or liquified petroleum gases or class 1 refrigerants such as refrigerant 12 or 22 shall be installed in accordance with the applicable provisions~~

~~of the appropriate national standards and codes used by the authority having jurisdiction.~~

~~§ 2104.03 INTERCONNECTIONS.~~

~~—When a solar energy system and an auxiliary energy system are interconnected, the maximum allowable temperature or pressure of either system shall not be exceeded in either operational or stagnant modes. The interconnections shall not compromise or by pass the required safety devices.~~

~~§ 2104.04 IDENTIFICATION OF MATERIALS.~~

~~—Materials, equipment and components shall be identified in accordance with the applicable provisions of Article 20, Section 20:060, of the Kentucky Building Code and Section M-4008 of the BOCA Mechanical Code incorporated in Article 11, Section 1100.4, of the Kentucky Building Code.~~

~~§ 2104.05 DRAINING AND FILLING OF LIQUID SYSTEMS.~~

~~—Liquid solar energy systems shall be capable of being drained and vented and of being filled without air entrapment.~~

~~§ 2104.06 PROTECTION FROM HEATED COMPONENTS.~~

~~—Solar energy systems and components which are subject to contact by unauthorized personnel and which are maintained at elevated temperatures shall be protected in accordance with approval by the enforcing agency.~~

~~§ 2104.07 PRESSURE, VACUUM AND TEMPERATURE RELIEF.~~

~~— (A) *Pressure relief.* Adequately sized listed or approved pressure relief devices shall be provided in pressurized solar energy systems and subsystems. Where a pressurized system or portion thereof can be isolated by valving each such isolated system or portion thereof shall have a listed or approved pressure relief valve. The devices shall be set to relieve the pressure at or below the maximum allowable pressure. Such devices shall drain to approved locations and when connected to the drainage system shall be connected in accordance with 2104.65.~~

~~— (B) *Vacuum relief.* Solar energy systems shall be designed to prevent damage by vacuum conditions or shall be provided with listed or approved vacuum relief valves.~~

~~— (C) *Temperature relief.* Those portions of a solar energy system connected to potable water supply shall be protected with listed or approved temperature relief devices in accordance with applicable provisions of the Kentucky Building Code.~~

~~§ 2104.08 PROVISIONS FOR LIQUID EXPANSION.~~

~~— Provisions shall be made for thermal expansion at both operating and stagnation temperatures.~~

~~§ 2104.09 FREEZE PROTECTION.~~

~~—Provisions shall be made to prevent damage from freezing of the heat transfer or storage fluids.~~

~~§ 2104.10 ACCESS AND LOCATION.~~

~~—Solar energy collectors, controls, dampers, fans, blowers and pumps shall be accessible for inspection, maintenance, repair and replacement.~~

~~2104.20 MATERIALS SPECIFICATIONS AND TESTS~~

~~§ 2104.21 GENERAL.~~

~~—Materials shall be listed or approved and be of an approved type, and shall be designated for the fluids they are to handle and for their intended use. Materials that may be adversely affected by environmental factors shall be protected in an approved manner.~~

~~§ 2104.22 SEALANTS AND GASKETS.~~

~~—Sealants and gasket materials used in pressurized systems shall be suitable for the combined system pressure and temperature and for the fluids contained. Seals used in solar systems shall comply with SS-M-3, SS-M-4, and SS-M-S in Appendix B.~~

~~§ 2104.23 HAZARDOUS HEAT TRANSFER FLUIDS.~~

~~— (A) — Heat transfer fluids which are hazardous shall not be used in solar energy systems except when approved by the enforcement agency.~~

~~— (B) — The flash point of heat transfer liquids shall be:~~

~~—— (1) — *Vented inside.* At least 50° F. above the design maximum operating temperature and as high as the maximum stagnation temperature of the liquid in the system.~~

~~—— (2) — *Vented outside.* At least 50° F. above the design maximum operating temperature and greater than the maximum stagnation temperature minus 200° F. of the liquid in the system provided the collector, collector manifold and manifold relief valve discharge neither directly nor indirectly into the building and away from open flames and ignition sources.~~

~~— (C) — A flammable gas or liquid shall not be used as a heat transfer fluid unless approved by the enforcement agency.~~

~~— (D) — The flash point of fluid used in factory or high hazardous occupancies may be lower subject to the approval of the enforcement agency.~~

~~2104.30 COLLECTOR~~

~~§ 2104.31 IDENTIFICATION.~~

~~—Manufactured collectors shall be labeled with the manufacturer's name, address and types of transfer fluids compatible with the collector design. Listed collectors shall also include the markings required under the terms of the listing. All collectors, including shop and sit-built collectors, shall be labeled to indicate the operating fluid, the maximum allowable temperature and pressure and the directions of fluid flow.~~

~~§ 2104.32 PRESSURE AND TEMPERATURE.~~

~~—All materials provided in the fluid passages of a collector assembly shall be capable of withstanding the maximum allowable pressure and temperature.~~

~~§ 2104.33 SEALS AGAINST LEAKAGE.~~

~~—Where leakage can cause an unsafe electrical condition, the construction of the collector shall provide protection against both external leakage of the contained fluid from the collector and internal leakage into the collector from environmental conditions or cleaning operations as performed during intended user maintenance as specified in the installer instructions.~~

~~§ 2104.34 AIR-HANDLING COMPONENTS.~~

~~—(A) The collector components which are exposed to air circulated to occupied spaces shall be non-combustible or shall have a flame spread not~~

~~exceeding 25 and a smoke developed rating not exceeding 50 when tested in accordance with SS-M-1 of Appendix B.~~

~~—(B)— *Exception.* When approved smoke detectors are installed in the duct system from the collector which, when activated, stop all air flow through the collector and sound an alarm, materials which meet the requirements of subsection (C) of this ordinance. Minimum sensitivity of approved smoke devices shall be set to operate when smoke reduces the intensity of a one foot long beam of white light by 4% or the equivalent.~~

~~—(C)— Insulating materials shall not flame, smolder, glow or smoke when tested in accordance with SS-M-2 of Appendix B at the temperature to which it is exposed in service. In no case shall the test temperature be below 250° F.~~

~~—(D)— The sustained design outlet temperature of collectors handling air circulated to occupied spaces shall not exceed 250° F. Higher outlet air temperatures may be used when connected to duct material approved or listed and installed for higher temperature use.~~

~~2104.40 THERMAL STORAGE~~

~~§ 2104.41 AIR SYSTEMS.~~

~~—(A)— Heat storage media and thermal storage tank materials, including any interior protective coatings, shall not impart toxic elements to air distributed to areas of human occupancy.~~

~~—(B)— Rocks and pebbles used as sensible heat storage shall be washed free of fines and organic material prior to placement in the rock storage bins.~~

~~—(C)— Materials exposed to the air passage shall be non-combustible or shall have a flame spread rating not exceeding 25 and have a smoke developed rating not exceeding 50 when tested in accordance with SS-M-1 of Appendix B.~~

~~—(D)— *Exception.* In one and two family dwellings, materials not meeting the criteria of subsection (C) of this ordinance may be used when smoke detectors approved for duct installation are installed which, when actuated, stop all air flow through the storage device and sound an alarm. Minimum sensitivity of approved smoke devices shall be set to operate when smoke reduces the intensity of a one foot long beam of white light by 4% or the equivalent.~~

~~—(E)— Where storage units are located outside or underground, they shall be adequately protected against the intrusion of water.~~

~~§ 2104.42 LIQUID SYSTEMS.~~

~~—(A)— Pressurized tanks shall be leak tested after installation except when the tank contains markings to indicate prior testing has been accomplished. The test pressure shall be 1.5 times the maximum allowable pressure. Non-pressurized tanks shall be tested visually for leaks by filling.~~

~~—(B)— Potable water systems shall be protected from makeup water cross connections to the solar energy storage system in accordance with the~~

~~requirements of Article 17 of the Kentucky Building Code and M-405.1 of the BOCA Mechanical Code incorporated in Article 11, Section 1100.4 of the Kentucky Building Code.~~

~~—(C)— All openings into tanks, except vents, shall be tightly covered and secured in place. Vents shall be screened with corrosion-resistant material having not less than 20 openings per linear inch, or otherwise protected.~~

~~—(D)— Non-pressurized tanks connected to a make-up water system shall have overflows directed to an approved point of disposal. Make-up water piping from the potable water systems shall be connected as required in § 2104.66.~~

~~—(E)— The liquid solar energy storage system shall be capable of being emptied.~~

~~—(F)— Shutoff valves shall be provided between the supply system and cold and hot water storage tanks.~~

~~2104.50 CONTROLS~~

~~§ 2104.51 GENERAL.~~

~~—In solar energy systems the following conditions must be prevented either by inherent design features or by equipping the system with the necessary controls:~~

~~—(A)— The addition of energy to the storage media when the temperature of the storage media has reached its maximum allowable temperature.~~

~~—(B)— Thermosiphoning which will allow components to be damaged by freezing.~~

~~—(C)— Heat transfer fluids from reaching the maximum allowable temperature of the system in liquid systems. The pressure and temperature relief devices required in § 2104.07 shall not be considered as controls to satisfy this condition.~~

~~—(D)— Damage from thermal shock.~~

~~—(E)— *Exception.* Provisions of this ordinance shall not apply where adequate data is submitted to demonstrate that these conditions will not occur due to the design and location of the system.~~

~~§ 2104.52 FAIL SAFE.~~

~~—The solar energy system shall revert to a safe mode in the event of manual shutdown or power failure.~~

~~§ 2104.53 WIRINGS.~~

~~—All switches and controls shall be clearly identified as to function. All warning lights, when provided, shall indicate the abnormal condition. If manual control adjustments are required during normal operation of the solar system, the control system shall be designed to assure that the safety of the system and the building in which it is installed are not compromised by failure to make those manual adjustments.~~

~~2104.60 DISTRIBUTION~~

~~§ 2104.61 MATERIAL SPECIFICATIONS.~~

~~—(A)— Piping materials shall conform to the manufacturer's recommendations, Article 17 of the Kentucky Building Code and Section M-400.8 of the BOCA Mechanical Code incorporated by reference in the Kentucky Building Code, Article 11, Section 1100.4.~~

~~—(B)— Piping shall be sized to limit the sustained fluid velocity to levels recommended by the pipe manufacturer considering the type of fluid.~~

~~§ 2104.62 PIPING INSTALLATION.~~

~~—(A)— Joints shall be of a type approved for the piping material being used and the intended use and shall conform to the manufacturer's recommendations, Article 17 of the Kentucky Building Code and Section M-409.3 of the BOCA Mechanical Code incorporated by reference in the Kentucky Building Code, Article 11, Section 1100.4.~~

~~—(B)— Joints between dissimilar materials shall conform to the manufacturer's recommendations and Article 17 of the Kentucky Building Code.~~

~~—(C)— Pipes embedded in structural concrete shall conform to § 2102.72.~~

~~—(D)— Changes in direction of piping shall conform to the manufacturer's recommendations, Article 17 of the Kentucky Building Code and Section M-409.3~~

~~of the BOCA Mechanical Code incorporated by reference in the Kentucky Building Code, Article 11, Section 1100.4.~~

~~—(E)—Where different sizes of pipe and fittings are to be connected, such connections shall conform to the manufacturer's recommendations and Article 17 of the Kentucky Building Code.~~

~~—(F)—Piping shall be supported in conformance with the manufacturer's recommendations, Article 17 of the Kentucky Building Code and Sections M-409.4 and M-409.6 of the BOCA Mechanical Code incorporated by reference in the Kentucky Building Code, Article 11, Section 1100.4.~~

~~—(G)—Pipe supports shall be spaced to conform with the manufacturer's recommendations, Article 17 of the Kentucky Building Code and Sections M-409.4 and M-409.6 of the BOCA Mechanical Code incorporated by reference in the Kentucky Building Code, Article 11, Section 1100.4.~~

~~—(H)—Piping shall be protected in conformance with the manufacturer's recommendations, Article 17 of the Kentucky Building Code and Section M-409.5 of the BOCA Mechanical Code incorporated by reference in the Kentucky Building Code, Article 11, Section 1100.4.~~

~~—(I)—Pipe openings in walls, floors or ceilings shall be closed and protected in accordance with §2102.60, 2102.71 herein, Article 17 of the Kentucky Building Code and Section M-409.5 of the BOCA Mechanical Code incorporated by reference in the Kentucky Building Code, Article 11, Section 1100.4.~~

~~—(J)— The annular space between sleeves and pipes in exterior walls shall be fitted in accordance with Article 17 of the Kentucky Building Code.~~

~~§ 2104.63 TRENCHING AND EXCAVATION.~~

~~—(A)— Trenching adjacent to footings shall be in accordance with Article 13 and Article 17 of the Kentucky Building Code.~~

~~—(B)— Trenching, bedding, tunneling, and backfilling shall be in conformance with Article 17 of the Kentucky Building Code.~~

~~§ 2104.64 TESTING.~~

~~—(A)— All piping embedded in structural concrete or masonry shall be tested in accordance with the Kentucky Building Code.~~

~~—(B)— All other piping shall be tested as follows:~~

~~———(1)—— Prior to piping tests and after all equipment has been installed, the liquid system shall be flushed to remove sediment, dirt, loose scale, and the like, as prescribed by the manufacturer. Strainers shall be cleaned or replaced. During flushing of the system, the collectors may be disconnected or by-passed to prevent the passage of debris through the collector.~~

~~———(2)—— Closed solar heating system piping using liquid heat transfer fluids not directly connected to the potable water supply shall be tested for pressures~~

~~not less than 1.5 times the maximum design operating pressure for a minimum of 15 minutes.~~

~~—— (3) — The portion of the system connected to the domestic water system shall be tested in the following manner. Upon completion of a section or of the entire water supply system, it shall be tested and proved tight under a water pressure not less than the maximum working pressure under which it is to be used. The water used for tests shall be obtained from a potable source of supply. Except for plastic pipe systems, the water test may be substituted by an air test of 50 pounds per square inch. Test pressures shall be maintained for a minimum period of 15 minutes without the system leaking. The piping being tested shall remain exposed for inspection and shall not leak during the test.~~

~~—— (4) — Open systems shall be tested by filling to overflow.~~

~~—— (5) — Final leak testing shall be at the maximum allowable pressure with the fluid to be used in the system.~~

~~§ 2104.65 DRAINAGE.~~

~~—— (A) — Solar energy system piping shall be provided with a method for drainage. If the system is drained through the building drainage system, it shall be through an air gap in accordance with Article 17 of the Kentucky Building Code.~~

~~—(B)— Drains serving heat transfer fluids over 140° F. or which are toxic or corrosive shall be protected in accordance with the requirements of Article 17 of the Kentucky Building Code.~~

~~—(C)— Drains in solar systems where high temperature, high pressure, or hazardous fluids are discharged shall have a warning label. For hazardous fluids, the label shall describe the hazardous properties of the fluid and emergency first aid procedures. Valves regulating such a discharge shall not be readily accessible to unauthorized personnel.~~

~~§ 2104.66 HEALTH.~~

~~—(A)— Potable water systems shall be protected against contamination in accordance with Article 17 of the Kentucky Building Code and Section M-413.0 of the BOCA Mechanical Code as incorporated by the Kentucky Building Code, Article 11, Section 1100.4.~~

~~—(B)— Heat exchangers used in domestic water heating systems shall be approved for the use intended. The system shall have adequate protection to assure that the potability of the supply and distribution water is properly safeguarded as approved by the enforcement agency.~~

~~—(C)— Food, drink or other products manufactured or processed for human or animal consumption shall not be stored, prepared or displayed beneath overhead distribution piping unless such pipes are protected against leakage or condensation reaching such products as required by the enforcement agency.~~

~~§ 2104.67 AIR DISTRIBUTION SYSTEM.~~

~~Duct systems shall be constructed and installed in accordance with Sections M-301.0 and M-302.0 of the BOCA Mechanical Code, as incorporated by reference in the Kentucky Building Code, Article 11, Section 1100.4.~~

~~EXHIBIT 1~~

~~REFERENCE STANDARDS~~

~~SS-E-1 National Electrical Code~~

~~NFPA 70 ANSI C1, 1978~~

~~REFERENCE STANDARD ADDRESSES~~

~~ANSI American National Standards Institute, Inc.~~

~~1430 Broadway~~

~~New York, New York 10018~~

~~NFPA National Fire Protection Association~~

~~470 Atlantic Avenue~~

~~Boston, Massachusetts 02210~~

~~EXHIBIT 2~~

~~REFERENCE STANDARDS~~

~~SS-M-1 Surface Burning Characteristics of Building Materials ASTM E 84-77~~

~~SS-M-2 Test for Hot-Surface Performance of High Temperature Thermal~~

~~Insulation ASTM C-411-61~~

~~SS-M-3 Specification for Rubber Seals Used in Flat Plate Solar Collectors~~

~~ASTM C-3667-78~~

~~SS-M-4 Specification for Rubber Seals Contacting Liquids in Solar Energy
Systems ASTM D-3832-79~~

~~SS-M-5 Specification for Rubber Seals Used in Concentrating Solar Collectors~~

~~ASTM D-3771-79~~

~~**REFERENCE STANDARDS ADDRESS**~~

~~ASTM American Society for Testing Materials
1916 Race Street
Philadelphia, Pennsylvania 19103~~

SECTION III. This Ordinance shall take effect upon its passage and approval.

Kathleen J. Herron
Metro Council Clerk

Rick Blackwell
President of the Council

Jerry E. Abramson
Mayor

Approved: _____
Date

APPROVED AS TO FORM AND LEGALITY:

Irv Maze
Jefferson County Attorney

BY: _____
Draft 1 08/20/07 11:40 a.m. epm